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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,166	11/30/2000	Harold A. Dvorachek	1709898	2672

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EXAMINER

KRECK, JOHN J

ART UNIT	PAPER NUMBER
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3673

DATE MAILED: 02/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/727,166

Applicant(s)

DVRACHEK, HAROLD A.

Examiner

John Kreck

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 16-19,26-30 and 51-64 is/are pending in the application.
- 4a) Of the above claim(s) 16-19,26-30 and 61-64 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 51-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

The amendment dated 12/3/02 has been entered.

Claims 16-19, 26-30, and 51-64 are pending.

### ***Election/Restrictions***

Claims 16-19 and 26-30 remain withdrawn from consideration as being drawn to non-elected species. Election was made in paper 8.

Newly submitted claims 61-64 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: these claims are not directed to the species shown in figure 11; note that the elected species shows threads to fasten the element; while claim 61 requires the element to be rotatable. The rotatable species is apparently shown in figure 12.

Accordingly, claims 61-64 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

The amendment filed 12/3/02 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the range of 20° to 60° added to claim 60, is not found in the original specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

***Claim Rejections - 35 USC § 112***

Claim 60 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. New claim 60 calls for an angle of 20° to 60°. This range is not supported by the original specification.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or  
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

1. Claims 51, 52, 54, and 55 are rejected under 35 U.S.C. 102(b) as being anticipated by Mills, et al. (U.S. Patent number 4,813,501).

Mills shows a replaceable cutting element (48) comprising a contact structure including a tip (52) and tapered structure concentric with the overall element; a mounting structure (near 42); and the contact structure bilaterally symmetric with a generally obtuse included angle as called for in claim 51.

Mills also shows an engageable structure as called for in claim 52.

Mills also shows the generally conical structure as called for in claim 54.

Mills also shows the point (52) as called for in claim 55.

Mills also shows an engageable structure with a non-cylindrical surface (see figure 3, the edges of the blade form a non-cylindrical surface) as called for in claim 56.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 58 is rejected under 35 U.S.C. 103(a) as obvious over Mills, et al.

Mills fails to explicitly disclose the material for the tip structure. It is notoriously conventional to make such structures with tungsten carbide (see page 2, line 20 of applicant's specification). It would have been obvious to one of ordinary skill in the art at the time of the invention to have made the Mills structure with carbide, as called for in claim 58, because it is relatively inexpensive and efficient for cutting.

3. Claims 57 and 59-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills, et al. in view of Reusser (U.S. Patent number 4,384,737).

Mills teaches all oh the limitations of claim 51, from which claim 57 depends, and also shows a screw thread, but fails to explicitly disclose a conical thread.

The advantages of conical screw threads are well known, as evidenced by Reusser. Conical threads offer easier installation and removal, as well as increased joint strength.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Mills device to have included a conical thread as called for in claim 57, in order to offer easier installation and removal, as well as increased joint strength.

Regarding independent claim 59:

Mills shows an elongated self locking replaceable cutting element comprising a contact structure comprising a cutting tip (52); a mounting structure (near 42); a helical thread structure; wherein the tip and mounting structures are formed on the same axis, and a portion of the tip is generally bilaterally symmetrical in at least three equally spaced radial directions.

Mills fails to explicitly disclose the conical thread.

The advantages of conical screw threads are well known, as evidenced by Reusser. Conical threads offer easier installation and removal, as well as increased joint strength.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Mills device to have included a conical thread as called for in claim 59, in order to offer easier installation and removal, as well as increased joint strength.

With regards to claim 60; Reusser fails to teach an angle between 20° and 60°. It is apparent that the conical thread must have some included angle; it is apparent that one of ordinary skill in the art would have arrived at an angle of between 20° and 60° through routine experimentation; thus it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the Mills tool to have an angle of between 20° and 60° as called for in claim 60.

4. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills, et al. in view of Evans (U.S. Patent number 4,148,368).

Mills fails to teach the material for the tip and tapered structures.

Evans shows a similar tool which includes a tapered structure with hardness softer than 92, and a tip with hardness greater than 92. This allows the tool to be manufactured with greatest wear resistance at the point of highest forces, while allowing the remainder of the tool to be manufactured from less expensive materials.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Mills tool to have included the tapered structure with hardness softer than 92, and the tip with hardness greater than 92 as called for in claim 53, in order to increase wear resistance while keeping costs down.

### ***Response to Arguments***

5. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kreck whose telephone number is (703)308-2725. The examiner can normally be reached on M-F 6:00 am - 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on (703)308-2978. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3597 for regular communications and (703)305-7687 for After Final communications.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-4177.

JJK  
February 22, 2003



**HEATHER SHACKELFORD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600**